Portland Harbor

Project Newsletter

Summer 2003

The Environmental Protection Agency (EPA) added Portland Harbor to its National Priorities List of contaminated sites in December 2000. This newsletter presents current information from the ongoing Remedial Investigation and Feasibility Study (RI/FS) and provides a progress update on upland investigations. We've also included information about fish tissue analysis and additional fish sampling by the Oregon Department of Human Services. Together, these studies will find out what kinds of contamination are present in the harbor, where the sources are, and what risks they pose to people and wildlife.

EPA Completes Review of Draft Work Plan and Field Sampling Plan

By Judy Smith, EPA

In March and April 2003, the Lower Willamette Group (LWG) submitted to EPA a revised Programmatic Work Plan and the Round 2A Field Sampling Plan for the RI/FS. When approved, this Work Plan will detail the steps necessary to determine the nature and extent of contamination in Portland Harbor sediments. It will also help assess the related risks to human health and the environment. The Programmatic Work Plan provides a roadmap for the project through successful completion of the RI/FS.

The Round 2A Field Sampling Plan describes specifically how and where the next set of samples will be collected to meet the objectives of the Work Plan. EPA and its partners have completed review of the Work Plan and expect to complete the Round 2A Field Sampling Plan review later this summer.

EPA combined its comments on the Work Plan with input from the Interagency Technical Coordination Team (TCT), the Portland Harbor Community Advisory Group and others. The TCT includes technical staff from Department of Environmental Quality (DEQ), natural resource and tribal trustees. While this extensive planning effort is time-consuming, it is extremely important to ensure that the investigation of Portland Harbor is technically sound, scientifically valid and legally defensible.

(continued on page 2)

In This Issue

Draft Work Plan and Field Sampling Plan *(continued from page1)*

EPA's review of the Work Plan focused on basic questions, such as:

- Are the tasks and activities identified in the Work Plan sufficient to complete the Remedial Investigation including the baseline risk assessments?
- Does the plan adequately evaluate risk to wildlife and habitat?
- Is the approach for evaluating groundwater as a potential source of contamination to Portland Harbor sediments appropriate?
- Is contamination up and downstream from the initial study area being characterized and evaluated adequately to establish the final boundaries for the Superfund site?

The Field Sampling Plan review focuses on this basic question:

- Does the proposed Round 2A Field Sampling Plan provide a solid advancement in our understanding of the nature and contamination at the site?

On July 25, 2003, EPA gave the Lower Willamette Group detailed comments identifying areas that need modification or improvement in the Work Plan. EPA's comments are available on the agency website. The LWG has 30 days to make revisions to the plan. We will update you in the next newsletter on progress on finalizing the Work Plan and the Round 2A Field Sampling Plans.

Fish Tissue Data Will Aid Evaluation of Potential Health Risks

AN IMPORTANT MILESTONE WILL BE REACHED THIS FALL, when the LWG provides EPA with the results of resident fish tissue samples taken in 2002. Contaminant levels in samples from sediment and fish collected from the harbor in 2002 are now being analyzed, and the data validated. EPA and the LWG agreed upon approved methods to capture and analyze resident fish and shellfish species, such as brown bullhead, black crappie, carp and smallmouth bass.

More than 1,800 fish were collected. Surface sediment samples were also collected in some areas in addition to certain species of fish and shellfish. The resident fish tissue data will be used in the Portland Harbor remedial investigation to assess bioaccumulation effects from contaminated sediments through the food chain to humans and wildlife and to determine protective sediment cleanup levels.

It is important to note that Spring Chinook salmon, white sturgeon and Pacific lamprey were not selected for sampling under Round 1 of the Superfund investigation because it is difficult to correlate contamination in the tissues of these migratory fish with sediment contamination from a specific place.

In order to provide clear guidance to the public about the safety or risks of eating resident fish caught in Portland Harbor, the Oregon Department of Human Services (ODHS) and the Agency for Toxic Substances and Disease Registry *(*ATSDR) (see sidebar on the SHINE program) will review the resident-fish tissue results. Also, because Spring Chinook salmon, white sturgeon and Pacific lamprey are important species for sport fishing and Tribal harvests, ODHS is conducting a separate sampling effort to provide data needed to evaluate the level of contamination of these species. The ODHS migratory fish study is being carried out separately from the Superfund investigation, and is discussed in the next article.

ODHS issued a fish advisory in December 2001

for the entire main stem of the Willamette River based on the presence of mercury, polychlorinated biphenyls (PCBs), chlorinated pesticides and dioxin in fish tissue throughout the river. The fish advisory recommends limiting consumption of fish to protect people from the effects of contaminants, while recognizing the important health benefits of fish in the diet. ODHS will evaluate the Portland Harbor resident fish tissue data to see if eating resident fish caught in Portland Harbor presents additional health risks. If additional risks are identified, then ODHS will amend the existing fish advisory to protect the public.

The ODHS SHINE program will also review Portland Harbor resident fish tissue data to see if a Public Health Consultation is warranted. These public health consultations are designed to categorize risk to public health and create a public health action plan.

Because there is a great deal of public interest in this issue, ODHS, EPA and DEQ are planning to host a public meeting this fall to present the results of the ODHS and SHINE reviews of the Portland Harbor resident fish data. For updates to see when the meeting is scheduled, check the DEQ Portland Harbor website:
www.deq.state.or.us/nwr/portland harbor
or the EPA Portland Harbor website:
http://yosemite.epa.gov/R10/CLEANUP.NSF/sites/PtldHarbor .

<> <> <> <> <> <> <>

ODHS To Sample Salmon, Sturgeon and Lamprey Fish

By Amanda Guay ODHS

ODHS IS SPEARHEADING AN EFFORT TO SAMPLE Chinook salmon, sturgeon, and lamprey fish to analyze the tissue for selected contaminants. Due to lack of data, the current fish advisory does not include migratory fish, such as sturgeon or salmon, which are often caught in this area.

Several Native American tribes, the Portland Harbor Community Advisory Group and other community members have expressed interest in obtaining data from salmon and sturgeon, which are caught in Portland Harbor and the Lower Willamette, and from lamprey which are caught upstream of the Harbor at Willamette Falls. This risk is currently unknown and the information will not be collected as a part of the Portland Harbor Superfund investigation.

Spring Chinook salmon and Pacific lamprey are anadromous species, or fish that migrate between rivers and the ocean, that spend a majority of their lives in the Pacific Ocean. Although sturgeon are not an anadromous species, the adults have large home ranges based on the availability of food and suitable habitat. This home range can include the Willamette River, the lower Columbia River and the ocean. Young sturgeon may spend a majority of their time in the Willamette River.

In response to these requests for better understanding of human health risks from eating migratory fish from the Portland Harbor site, ODHS has launched a multi-agency sampling and analysis effort. The sampling is currently ongoing. The Agency for Toxic Substances and Disease Registry (ATSDR) has provided financial assistance to collect samples of Chinook salmon, sturgeon, and lamprey fish and analyze them for selected contaminants.

The objectives of this study are to:

- Characterize the extent of contamination in Chinook salmon, white sturgeon and Pacific lamprey that spend a portion of their life within the Portland Harbor Superfund site boundaries. Sport fishermen prize the Chinook salmon and white sturgeon, and the lamprey is significant to the diet and culture of many tribes.
- Inform the public about the potential risks associated with eating salmon and sturgeon within Portland Harbor and the lower Willamette River, and if necessary, issue fish advisories based on the contamination found in the sampling and analysis effort.

(continued on page 4)

ODHS Salmon, Sturgeon, Lamprey Sampling *(continued from page 3)*

ODHS is working cooperatively with USEPA and Oregon Department of Fish and Wildlife to pursue these objectives, as well as to obtain additional funds for further analysis.

In January 2002, the ATSDR developed a preliminary public health assessment for Portland Harbor. The assessment concluded that eating contaminated fish is the main way people would be exposed to Portland Harbor contaminants, and that more research was needed to assess specific risks. The SHINE program will create an updated version of the public health assessment once the beach sediment, surface water and fish tissue data are all available.

About the ODHS
Portland Harbor Program

*Oregon's **SHINE** Program, or **S**uperfund **H**ealth **IN**vestigation and **E**ducation, within the Oregon Department of Human Services (ODHS), began in 2001 through a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), a national public health service agency. ODHS's SHINE Program works to assess and prevent human exposure to contamination at Oregon sites listed on the Superfund National Priority List and at other sites at the request of concerned individuals and organizations.*

SHINE's goal is to evaluate and prevent exposure to hazardous substances from industrial waste sites, unplanned releases of toxic substances, and other sources of pollution present in Oregon's environment. SHINE examines the risk of adverse human health effects associated with such exposures and educates the community on how to reduce or prevent exposures. SHINE works cooperatively with EPA, DEQ, local health departments, ATSDR and, most importantly, the affected communities.

APPLICATIONS

for Portland Harbor
Fish-Consumption Mini-Grants
Are Now Available

Small grants are available for community organizations to help educate an affected community about consumption guidelines and safe preparation methods for fish from Portland Harbor.

For an application, call the Department of Human Service's SHINE (*Superfund Health INvestigation & Education*) Program at 503-872-5357 or visit www.healthoregon.org/superfund.

For more information about the SHINE program, contact ODHS or visit the website at: www.healthoregon.org/superfund
or

Dave Stone
Public Health Toxicologist
503-731-4012
dave.stone@state.or.us

Amanda Guay
Public Health Educator
503-731-4025
amanda.m.guay@state.or.us

Uplands Update By Fenix Grange, DEQ

While EPA shepherds the in-water investigation and cleanup of Portland Harbor with the Lower Willamette Group, DEQ is responsible for managing cleanup activities on the shores and upland areas of Portland Harbor.

Joint Source Control Strategy in Progress

DEQ and EPA have joined forces to develop a Joint Source Control Strategy for Portland Harbor. The goal of the Strategy is to identify and eliminate or control current and historical sources of contamination to Portland Harbor. Eliminating and controlling contaminant sources is crucial to restore the river's health for humans and wildlife and to ensure that Portland Harbor is not recontaminated after the Superfund in-water cleanup is completed.

The Joint Source Control Strategy addresses hazardous substance releases from upland properties in the DEQ Cleanup Program. It also addresses contaminants moving into the river through stormwater discharges, runoff, groundwater migration, spills, and permitted discharges from other upland sources. Other possible sources of contamination include over-water and in-water discharges and upstream contributions.

The objectives of the Joint Source Control Strategy are to:

1. Identify and prioritize all potential sources of contamination to Portland Harbor sediments and surface water

2. Facilitate evaluation of sources of contamination to Portland Harbor

3. Set screening levels for contaminants of interest to identify potential sources and define criteria for requiring source control measures

4. Partner with DEQ's Water Quality Program and the City of Portland to develop a regulatory or technical framework to reduce contaminant transfer through stormwater

5. Provide outreach to area businesses about toxic use reduction; best management practices; and safe handling, storage and disposal of hazardous materials to reduce non-point-source contamination

6. Implement effective source control decisions that reduce, control or eliminate ongoing contamination of Portland Harbor

7. Establish milestone and reporting requirements for source-control activities.

The Joint Source Control Strategy is designed as the companion document for the Portland Harbor RI/FS. The draft strategy document is in development and will be released for public comment this fall.

<> <> <>

DEQ Technical Assistance Lends a Hand to Portland Harbor Businesses

WHILE MUCH OF THE HISTORICAL CONTAMINATION OF Portland Harbor sediments can be attributed to specific large-scale industrial activities and point sources that existed as far back as the late 1800s, continuing contamination of the sediments may be occurring as a result of existing-point and

(continued on page 6)

DEQ Technical Assistance *(continued from page 5)*

non-point sources from current activities in the Portland Harbor basin and subsequent transport of pollutants to the river by groundwater migration or stormwater runoff from upland sites.

TU/WRAP

As a part of a pilot project for the Joint Source Control Strategy, DEQ's Toxic Use/Waste Reduction Assistance Program (TU/WRAP) offered technical assistance to area businesses in two Portland Harbor outfall areas to reduce use of toxic chemicals and improve handling and disposal procedures for hazardous materials to reduce or eliminate potential sources of contamination to the river. Because businesses that generate large quantities of hazardous waste are already closely supervised by DEQ, the TU/WRAP effort focused on businesses that generate less that 2,200 pounds of hazardous waste per month.

Participation in the program is voluntary, and by statute, TU/WRAP services do not lead to enforcement or compliance inspections unless there is an imminent threat to human health or the environment.

Between November 2002 and April 2003, TU/WRAP contacted 65 businesses in two outfall drainage basins. City Outfall M-1 drains stormwater from a portion of Mock's Bottom and discharges into Swan Island Lagoon. City Outfall 18 drains a portion of Northwest Portland and discharges to the Willamette River adjacent to the Gunderson property. TU/WRAP made 41 visits, resulting in 83 recommendations to business owners. Of facilities with significant quantities of hazardous materials, only two chose not to participate in the outreach. Facilities not visited largely consisted of retail establishments, offices, and small warehouses.

The most frequent recommendation was to label containers as to contents, such as: used oil, spent antifreeze, or other specific type of waste or material. Instruction for completing and documenting hazardous waste determinations was also common.

TU/WRAP staff communicated more appropriate waste management methods for used oil filters, florescent tubes and spent aerosol cans. Staff provided guidance on waste storage methods and information on improving recycling practices. TU/WRAP also provided suggestions to significantly improve secondary containment to prevent spills, and addressed wastewater and stormwater practices.

TU/WRAP staff encountered eight facilities that were using halogenated solvents, including one business that was using methylene chloride dip tanks. Staff explained the hazards of using these compounds and recommended less toxic, non-chlorinated alternatives to reduce exposure, emissions and waste toxicity.

Businesses exhibited a wide range of environmental awareness and sophistication. Some of the facilities have excellent environmental programs, while others need to improve their management of waste and petroleum product storage, and consider use of less toxic chemicals for their business operations. Based on replies received so far, 80 percent of respondents have made positive changes in their environmental business practices that will help protect the river from current sources of contamination. DEQ hopes to expand this pilot program throughout the Portland Harbor basin as a part of the Joint Source Control Strategy.

<> <> <>

Gunderson Plans Interim Source Cleanup

In July 2003, DEQ approved an interim cleanup action by Gunderson, Inc. to limit the migration of groundwater contaminated with the solvent 1,1,1-trichloroethane (TCA) toward the Willamette River and to remove TCA from soil and groundwater in the source area. An originating spill occurred under FMC Corporation ownership in 1980. The interim cleanup at Gunderson will take place while the upland Remedial Investigation and Feasibility Study is being completed, before a final cleanup solution is determined for the site.

DEQ will closely monitor the effectiveness of the treatments for safety and effectiveness, which may be modified if they don't work as designed. The adequacy of the interim cleanup will be revisited when the final upland cleanup remedy is selec-ted by DEQ in the Record of Decision. DEQ expects to approve specific implementation plans later this summer and the cleanup will start in the fall.

Site Background

A century of historical industrial practices contaminated Willamette River sediment with hazardous substances, such as heavy metals like mercury, polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons (PAHs), dioxin/furans and pesticides. EPA added Portland Harbor to the National Priorities List in December 2000.

EPA is the lead agency for cleaning up contaminated sediments and DEQ serves as lead agency for cleaning up sites on land along the river. EPA and DEQ are working in cooperation with state and federal agencies and Tribes to ensure a cleanup that meets the needs of everyone.

A group of potentially responsible parties, known as the Lower Willamette Group, have entered an agreement with EPA to conduct the *Remedial Investigation and Feasibility Study*, a task required by Superfund law. Many of the tasks described in this newsletter are required parts of these studies.

Community Advisory Group News

A group of dedicated volunteer community members representing a wide range of interests and concerns formed the Portland Harbor Community Advisory Group (CAG) in April 2002. The CAG has been valuable to EPA, DEQ and the other agencies working on the cleanup making sure that community concerns are heard and considered during the investigation and cleanup of Portland Harbor.

FOR MORE INFORMATION, please contact:

Judy Smith
EPA Community Involvement Coordinator
503-326-6994, Portland
smith.judy@epa.gov

Chip Humphrey
EPA Remedial Project Manager
502-325-2678
Humphrey.chip@epa.gov

Fenix Grange
DEQ Portland Harbor Project Coordinator
502-228-6590
grange.fenix@deq.state.or.us

Jim Anderson
DEQ Portland Harbor Project Coordinator
502-228-6825
Anderson.James.R@deq.state.or.us

For people with disabilities: please call Judy Smith to request reasonable accommodations. For TTY users: please call 1-800-977-8339 and give the operator Smith's phone number.

United States
Environmental Protection
Agency

Region 10 (ECO-081)
1200 Sixth Avenue
Seattle WA 98101

PORTLAND HARBOR NEWSLETTER
PORTLAND, OREGON
AUGUST 2003